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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/571,260	03/09/2006	Randolf Hugo	1281000212US1	8211

23416 7590 01/19/2007  
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EXAMINER
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GALE, KELLETTE

ART UNIT	PAPER NUMBER
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1621

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/19/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/571,260

Applicant(s)

HUGO ET AL.

Examiner

Kellette Gale

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>June 5, 2006</u>  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION*****Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-21 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-24 of copending Application No. 10/570,099. Although the conflicting claims are not identical, they are not patentably distinct from each other because they cover the same scope of invention.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-21 are provisionally rejected under 35 U.S.C. 103(a) as being obvious over copending Application No. 10/570,099 which has a common invention with the instant application. Based upon the earlier effective U.S. filing date of the copending

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application, it would constitute prior art under 35 U.S.C. 102(e) if published or patented. This provisional rejection under 35 U.S.C. 103(a) is based upon a presumption of future publication or patenting of the conflicting application.

This provisional rejection might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the copending application was derived from the inventor of this application and is thus not the invention "by another," or by a showing of a date of invention for the instant application prior to the effective U.S. filing date of the copending application under 37 CFR 1.131. This rejection might also be overcome by showing that the copending application is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wambsganss et al (US application 10/570,099).

Wambsganss et al claims a process for preparing xylylenediamine by continuously hydrogenating liquid phthalonitrile over a heterogeneous catalyst in the presence of liquid ammonia in a reactor, which comprises mixing a stream of a phthalonitrile melt in liquid form by means of a mixer unit with a stream of liquid ammonia and conducting the liquid mixture into the hydrogenation reactor. The difference is that meta-xylylenediamine is also being prepared by Wambsganss.

It would be obvious for one having ordinary skill in the art to perform the operation as recited by applicant after reviewing the invention as recited by

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Wambsganss. One having ordinary skill in the art would be motivated to do so as it has been done successfully by Wambsganss.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurek (US 4,482,741) in view of Nakamura et al (US 6,476,269).

Applicant claims a process for preparing xylylenediamine comprising continuously hydrogenating liquid phthalonitrile over a heterogenous catalyst in the presence of liquid ammonia in a reactor, in which a portion of the reactor effluent is recycled as a liquid circulation stream continuously to the reactor inlet.

**Determination of the scope and content of the prior art**

**(MPEP §2141.01)**

Kurek teaches a process where xylylenediamines may be prepared continuously by reducing phthalonitrile with hydrogen in the presence of a heterogeneous catalyst wherein yields of the desired product is achieved in excess of 90% with 100% conversion of isophthalonitrile (abstract and col.7, line 54). Kurek recites the use of nickel or cobalt catalyst on Kieselguhr (col. 2, lines 47-60 and col 4, line 24).

Nakamura et al teaches a method for producing xylylenediamine continuously by hydrogenating phthalonitrile synthesized by ammoxidation of xylene, wherein phthalonitrile is trapped in an organic solvent at a temperature of 300-500°C (abstract and col 4, line 32), a catalyst comprising nickel and/or cobalt supported on a carrier (col 5, lines 55-59). Separation of ammonia is preferably carried out through distillation (col 6, lines 9-10) and an organic solvent (cyclohexane) is used for the extraction (col. 6, lines 35-46).

#### **Ascertainment of the difference between the prior art and the claims**

##### **(MPEP §2141.02)**

The difference between the prior art and the claims is that there is no phthalonitrile melt used in the process specific process conditions are not taught or are different from those claimed. Also, the specific type of reactor is not taught.

#### **Finding of prima facie obviousness**

##### **Rational and Motivation (MPEP §2142-2143)**

Although no specific concentrations, etc. are recited, merely modifying the process conditions such as temperature and concentration is not a patentable modification absent a showing of criticality. In re Aller, 220 F.2d 454, 456, 105 USPQ

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233, 235 (CCPA 1955). Also, since the phthalonitrile is being introduced in a heated state, it is obvious for one of ordinary skill in the art to recognize the heated phthalonitrile as being at least slightly melted in order to carry out the process. One of ordinary skill in the art would be motivated to rely on melting the phthalonitrile in order to get it in liquid form as it is stated that phthalonitrile is not soluble in many solvents.

Also, it would be obvious for one having ordinary skill in the art to use any type of reactor suitable for continuous operations. One having ordinary skill in the art would be motivated to do so in order to optimized process conditions.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kellette Gale whose telephone number is (571) 272-8038. The examiner can normally be reached on M-F (6:30am-3:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page can be reached on (571) 272-0602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Kellette Gale  
Patent Examiner  
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*January 11, 2007*

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